



# RAILROAD COMMISSION OF TEXAS

## HEARINGS DIVISION

OIL AND GAS DOCKET NO. 02-0281299

---

THE APPLICATION OF NOR-TEX RESOURCES, L.L.C. FOR A COMMERCIAL PERMIT TO DISPOSE OF OIL AND GAS WASTE BY INJECTION INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL OR GAS, NOR-TEX SWD LEASE WELL NO. 1, EAGLEVILLE (EAGLE FORD-2) FIELD, KARNES COUNTY, TEXAS

---

HEARD BY: Andres J. Trevino P.E., Technical Examiner  
Laura Miles-Valdez, Hearings Examiner

### APPEARANCES:

#### APPLICANT:

Stephen Fenoglio  
Justin McIntosh  
Kerry Pollard  
Harold E. Von Dran

#### REPRESENTING:

Nor-Tex Resources, LLC

#### PROTESTANTS:

Sue Carter  
Rob Hargrove  
Charles E. Graham, III

Self  
Sue Carter  
Sue Carter

### PROCEDURAL HISTORY

Application Filed:	February 27, 2012
Request for Hearing:	February 12, 2013
Notice of Hearing:	March 21, 2013
Date of Hearing:	April 18 & 19, 2013
Proposal For Decision Issued:	October 11, 2013

### EXAMINERS' REPORT AND PROPOSAL FOR DECISION

### STATEMENT OF THE CASE

Nor-Tex Resources, LLC (Nor-Tex) requests authority pursuant to Statewide Rule

9 to operate Well No. 1 on its Nor-Tex SWD Lease in Karnes County as a commercial disposal well. Nor-Tex had received a commercial disposal permit on March 29, 2012, however, a review of a complaint filed by Sue Carter, caused the Commission to rescind the permit. The complainant alleged she did not receive notice of the application. A hearing was held on October 3, 2012 that resulted in a Final Order 02-0277320 issued on February 12, 2013 that determined proper notice was not given to Sue Carter. Nor-Tex requested a second hearing to reapply for this commercial permit. This application is protested by Sue Carter, an adjacent landowner to the tract on which the proposed disposal well will be located.

### **DISCUSSION OF THE EVIDENCE**

#### **Applicant's Evidence**

The subject well has been drilled. The well is drilled through the Wilcox and Poth formations to a maximum depth of 7,600 feet. The well has 5,360 feet of 9<sup>5</sup>/<sub>8</sub>" surface casing with cement circulated from the casing shoe to the ground surface, and 7" casing set through the Wilcox and Poth, at a depth of 7,600 feet. The 7" casing was cemented with 345 sacks of cement and two cement squeeze operations (260+ sacks) were performed at a depth of 6,570 feet and 6,000 feet leaving the top cement at 5,390 feet as verified by a cement bond log ran on March 28, 2013. (See Wellbore Diagram attachment). The Commission's Groundwater Advisory Unit (GAU) recommends that usable-quality ground water be protected to a depth of 5,300 feet. The GAU further requires that fresh water contained in the interval from the land surface to a depth of 600 feet and the Carrizo from a depth of 4,100 feet to 5,300 feet must be protected. The GAU further identifies the base of the USDW at a depth approximately 5,900 feet.

The proposed injection will be through 4<sup>1</sup>/<sub>2</sub>" tubing set on a packer at approximately 6,150 feet, but no higher than 100 feet above the top of the injection interval. The proposed injection interval is the Wilcox and Poth formations, the top of which is expected to occur at about 6,200 feet. The proposed injection interval is between 6,200 and 7,500 feet. The estimated depth of the Wilcox and Poth is based on the log of the Petrolero Corporation-Spoonamore No. 2. This well is approximately 3 miles south of the proposed well and is the closest well which penetrated the Wilcox and Poth and for which an electric log is available. The log shows there is approximately 500 feet of shale separating the top of the injection interval and the base of the usable quality water. Additionally, there is 800 feet of Midway shale separating the base of the injection interval from any other formation. The proposed maximum injection volume is 25,000 BWPD. The proposed maximum injection pressure is 3,100 psig.

There are three active horizontal oil wells within a ¼ mile radius of the proposed disposal well. Two of the wells, the Melinda Beckett Unit A, No.1 and the Melinda Beckett Unit B, No.1 do not have wellbores within the ¼ mile radius but have laterals that pass within the ¼ mile radius. The laterals are completed in the Eagleford Shale which is found

at a depth of 11,600 feet to 12,662 feet, well below the base of the proposed disposal interval at 7,500 feet. The third well, the Marathon Oil Gersbach-Pawelek Unit No.1, has a wellbore within ¼ mile radius. The well's casing is set to a true vertical depth of 10,990 feet with cement circulated to the surface. The well has surface casing set at 5,300 feet with cement circulated to the surface. None of the wells within the ¼ mile radius of review provides a potential conduit for disposal fluids to leave the permitted interval or pose a potential threat to usable quality water or oil and gas production in the area.

Nor-Tex, out of caution, performed a more extensive, (½ mile radius) area of review. The ½ mile review identified two additional wells within the ½ mile of the proposed well. They identified one shut-in Eagleford oil well, and one permitted Talisman Eagleford horizontal well. The Talisman Red Crest Trust Unit A No.1H has cement behind the casing from a depth of 10,826 feet to the surface. Well records of the wells within the ½ mile radius demonstrate the wells will not pose a potential threat to usable quality water or oil and gas production in the area. The four wells were drilled, completed or plugged in a manner that protects the fresh water zones.

Nor-Tex conducted a water-well study in the area to verify sources of freshwater in the area. They used public records (Texas Commission on Environmental Quality) to identify sixteen water wells within two miles of the proposed disposal well. The wells are used for livestock, industrial, rig supply and domestic purposes. The water well depths range from 200 feet to 1,210 feet, indicating all area water wells are exploiting only the shallowest ground water resources. The proposed Nor-Tex SWD Well No. 1 has 5,360 feet of 9<sup>5</sup>/<sub>8</sub>" surface casing with cement circulated from the casing shoe to the ground surface to protect the groundwater resources.

Nor-Tex conducted an environmental site assessment to determine the condition of the land prior to Nor-Tex taking possession of the property. The conclusion of the report was the property was mostly undeveloped or agricultural land and there was a low environmental risk to the property for Nor-Tex to operate their disposal facility. Nor-Tex conducted a National Environmental Policy Act of 1992 report (NEPA checklist). The report found no record of any threatened or endangered species or habitat within one mile of the property. The report concluded there were no concerns in regard to National Environmental Policy Act of 1992 with the property. Nor-Tex prepared a spill prevention control countermeasures plan as required by 40 CFR, Part 112. The plan is not required until the facility is in operation. The report describes the measures taken to prevent the release of fluids from the facility into the environment. A final revised report will be prepared once the facility is built.

The design of the facility is based on Nor-Tex's members experience in constructing and operating other disposal facilities. Justin McIntosh, a member of Nor-Tex has designed and overseen the construction of over twenty saltwater disposal facilities and has operated many disposal facilities for other operators. The proposed facility will be a closed system which uses pipelines and closed tanks to unload, transport, treat and store disposal fluids. The proposed facility will consist of a location pad with eight 750 bbl saltwater tanks, two

1,000 bbl saltwater blowdown tanks, two 750 bbl oil tanks, two 750 barrel gun barrels, and pressure regulated injection pumps. The pressure regulated injection pumps are set to shut off at the maximum disposal pressure of 3,100 psi to ensure the maximum authorized pressure is not exceeded. All tanks will sit inside a concrete secondary containment basin with 18 inch concrete walls. All surface areas which are expected to handle fluids will be constructed of concrete. The facility will have four unloading bays which will allow up to four trucks to simultaneously unload their fluids. Fluids will be unloaded by hoses through above ground pipelines to "sand" tanks. The fluids will remain in the sand tanks to allow any solids to settle and separate from the fluids. The fluids will then be transferred to the gun barrels to separate any oil from the injection fluid prior to injection. The entire location pad will have a built-up limestone base. Because the elevation of the facility is such that any spills that occur at the facility will flow to the south, an area south of the unloading bays is designated for tertiary containment. Should there be a release outside a containment area Nor-Tex would have the ability to build a containment dam to contain the fluids and prevent the fluids from leaving the property. The entire pad will be outside the 100-yr flood plain. The pad is large enough to accommodate over 25 trucks on the property without the need to have trucks parked and waiting along the county road to off-load disposal fluids. At other area disposal facilities trucks often wait along county roads to enter the disposal facility to unload their fluids. Trucks will enter the facility off FM 99 on the north side of the property and travel to one of four unloading bays. Unloaded trucks will then exit the facility through the south exit on to FM 2102. The facility will be staffed 24/7 to monitor operations and incoming waste streams.

Nor-Tex plans to use the proposed well to dispose of produced water and frac water generated as a result of the active and ongoing development of the Eagleford Shale in the area. Nor-Tex believes that additional disposal facilities are necessary to accommodate the active drilling which generates large quantities of disposal fluids. Nor-Tex presented a letter of support from a potential customer stating they had a need and interest in using the proposed disposal facility. Nor-Tex received a letter from a water hauling company, Titan Vacuum Services, that hauls and dispose of saltwater in Karnes County. Titan indicated they would welcome and support additional disposal capacity the proposed facility would provide. Titan states area permitted disposal facilities are unacceptable to Titan and have negatively impacted their business and their ability to provide good customer service to the oil industry. Titan stated they have experienced long wait times and congestion at existing commercial disposal facilities and would be able to haul between 3,000 and 15,000 BWPD to the Nor-Tex facility. Nor-Tex further believes there is a need for additional disposal capacity in the area even though there are numerous permitted commercial disposal well sites within a ten mile radius of Nor-Tex's proposed well. Mr. McIntosh is aware that many of the sites were permitted by speculators with no intention of building and operating the facility but to only sell the permit. He himself has looked at purchasing such permits. Other operators may have a permit issued by the Commission, but may not have the required capital to drill a disposal well and build the required surface facilities. Without knowing who intends to build and operate a permitted facility, it is unknown if any of the permitted facilities will get built. Mr. McIntosh identified three wells he knew were speculator permits within a 10 mile radius. He identified the Four Fountains FF Coy City SWD No.1, the Pyote Water Systems, Fashing Hwy SWD 99, No. 1, and the

Windermere Energy, WE Fashing, No. 1A as speculator permits. Nor-Tex has had conversations with several other trucking companies such as Supreme Vacuum Services, Stallion Oilfield Services and PXP (an oil and gas operator) which have expressed much interest in bring water to the proposed facility.

The Eagleford Shale trend is a large unconventional trend that is under going active, rapid development throughout Karnes, Atascosa and Live Oak Counties. Well data shows that in Karnes County as of December 2011, there were 282 producing oil wells. One year later in December 2012 there were 683 oil wells producing in Karnes County. Oil and gas production from the Eagleford Shale in Karnes County has also increased dramatically. In December 2011, oil and condensate production was approximately 2.4 million barrels per month. In December 2012, oil and condensate production was 4.9 million barrels per month. Well data for Karnes, Atascosa and Live Oak Counties combined shows that as of December 2011, there were 511 producing oil wells. One year later in December 2012, there were 1,098 oil wells producing in the three counties. Oil and gas production from the Eagleford Shale in Karnes, Atascosa and Live Oak Counties combined has also increased dramatically. In December 2011, oil and condensate production was approximately 4.0 million barrels per month. In December 2012, oil and condensate production was 6.8 million barrels per month. Within a 10 mile radius of the proposed disposal well, there are over 100 completed and permitted Eagleford Shale wells. Nor-Tex stated they would not engage in permitting and building the facility if they were not confident the facilities' services would be in demand.

Nor-Tex Resources, LLC has an active P-5 on file with the Commission, with a \$25,000 financial assurance bond. There are no active enforcement actions against Nor-Tex Resources.

Notice of the subject application was published in *Karnes Countrywide*, a newspaper of general circulation in Karnes County, on February 22, 2012. A copy of the application was mailed on February 29, 2012, to the Karnes County Clerk's Office and the offsetting surface owners and operators within ½ mile of the proposed well.

### **Protestant's Evidence**

Sue Carter was present to voice her concerns over the proposed disposal well. Mrs. Carter is an adjacent landowner to the tract on which the proposed disposal well is located. Mrs. Carter called on engineering expert, Charles Edwards Graham, III to identify issues with the well they felt were not compliant with the Commission rules regarding issuance of a commercial disposal well permit. Mr. Graham believes the surface casing is too short as it does not protect the water to a depth of 5,900 feet which is the depth of the underground source of drinking water (USDW). Mr. Graham stated the cementing of the surface casing was adequate to protect the Carrizo Aquifer as identified by Robert Traylor of the Commission's Groundwater Advisory Unit. Mr. Graham believes the cementing of the 7" production casing did not go as planned. A cement bond log (CBL) run on July 9<sup>th</sup> 2012, estimated the top of cement at 6,693 feet. A second CBL run on September 27<sup>th</sup> 2012; estimated the top of cement at 6,640 feet. A review of the daily drilling records show the well experienced a loss of mud circulation on June 7, 2012 at 6:00 am after placing the 7'

casing in the well. The next hour a cementing crew moved in to cement the well. The top of cement was determined to be 6,693 feet by the July 9<sup>th</sup> CBL. During March 19<sup>th</sup> through the 29<sup>th</sup> remedial cementing operations were performed to squeeze sufficient cement behind the casing. On March 20, 2013, the well was perforated at a depth of 6,570 feet and 260 sacks were squeezed out. A third CBL was run on March 22, 2013, and determined the top of cement was at 6,030 feet. A decision was made to re-squeeze the well. On March 23, 2013, the well was perforated at a depth of 6,000 feet and 100 sacks were squeezed out. A fourth CBL was run on March 25, 2013, that determined excellent bonding to 5,570 feet with a top of cement at 5,392 feet. Mr. Graham acknowledges the top of cement is at 5,392 feet but believes there are areas within the cemented interval that have poor bonding. A review of the fifth and final CBL by Mr. Graham indicates to him, there are sections that contain poor bonding.

Mr. Graham further studied if there was a need in Karnes County for the proposed disposal permit. Mr. Graham identified permitted capacity of injection wells already approved. He studied the volume of water being injected on a monthly basis using the H-10 filings from the Railroad Commission and saltwater disposal well operators. Mr. Graham identified 34 permitted commercial disposal wells in Karnes County off the Commission's website. Mr. Graham further identified 18 permitted commercial disposal wells within 20 miles and to the North and East of the proposed disposal well. The total monthly capacity of the 18 wells is 11,340,000 barrels per month. Mr. Graham reviewed the Commission online system for H-10 filings in Karnes County to determine the quantity of water being disposed on a monthly basis. Because the H-10 is filed annually, current and accurate volumes can not be determined. The more accurate reading would be in January 2012 which showed 1,241,542 barrels of saltwater disposed of. Mr. Graham used drilling activity data to compare January 2012 activity to January 2013 activity. The active rig count was 39 in January 2012 and 33 for January 2013 in Karnes County, suggesting activity level is flat or slightly less.

On cross examination, Mr. Graham was asked, in his opinion, how many feet of 100% bonded cement was needed to create a hydraulic cement seal, he replied, "fifty feet". Mr. Graham agreed Nor-Tex has done everything necessary to protect the usable quality water. Mr. Graham opined Nor-Tex should have set surface casing through the USDW at 5,900 feet. Upon reviewing the CBL, Mr. Graham identified good bonding on the log in excess of fifty feet. Mr. Graham agreed he could not identify which wells if any were constructed or were in operation. He further agreed he did not know if any of the permitted disposal wells were even capable of injecting at the rates authorized by the Commission. Mr. Graham further acknowledged he did not review the drilling activity or disposal needs in nearby counties of Atascosa, Bee, Live Oak or Wilson. Mr. Graham agreed he was aware of only three operators of the eighteen facilities permitted that had the adequate capital, personnel and expertise to build and operate such a facility.

#### **EXAMINERS' OPINION**

The examiners believe that this application should be approved. The Nor-Tex SWD No. 1 is completed in a manner which will confine disposal fluids to the proposed disposal interval in the Wilcox and Poth formations. Surface casing has been set and cemented

through the base of usable quality water. The longstring casing has been cemented to a depth of 5,390 feet to prevent migration from the injection interval. There are no oil or gas wells within the  $\frac{1}{4}$  or  $\frac{1}{2}$  mile radius of review that pose a threat of groundwater contamination or failure of confinement of injected fluids to the Wilcox and Poth formations. It is unlikely the operation of the Nor-Tex SWD No. 1 will result in the contamination of surface or subsurface water or will endanger or injure any oil, gas, or other mineral formation.

The well's construction meets or exceeds the Commission's requirements for a commercial disposal well into a non-productive interval. The Protestants assertion that the well's construction will not protect the USDW is incorrect. The Commission's requirement is for surface casing to be set no further than 200 feet below the base of the usable quality water which is found in this case at a depth of 5,300 feet. The surface casing is set at 5,360 feet, compliant with the Commission's requirement. The usable quality water is generally defined as freshwater with a chloride concentration of less than 3,000 ppm. The underground source of drinking water or USDW is generally classified as brackish water having a chloride concentration between 3,000 ppm and less than 10,000 ppm. The Commission does not require surface casing to be set to the USDW depth of 5,900 feet, or even that the operator set cement across this interval. The Commission forbids the direct injection of disposal fluids into a USDW zone. The applicant is compliant with this requirement by injecting into the interval from 6,200 feet to 7,500 feet.

The Protestant second assertion - that the well has inadequate cement above the injection zone and is not compliant with Commission requirements is incorrect. Nor-Tex's initial cementing operation for the well's production casing proved to be inadequate after review of the cement bond log. Nor-Tex remedied the situation by performing two cement squeeze operations until the top of cement was found at a depth of 5,390 feet. The service company, PPLS Inc., the Protestant expert and Nor-Tex agree the top of cement is at 5,390 feet. The expert questions the quality of the cement bonding between the casing and formation. The Commission requires the top of cement to be at least 100 feet above the injection interval if the top is determined by a cement bond log. The top of cement in the proposed well is 810 feet above the injection interval. Although there are sections within the 810 foot section that show the cement is not 100% bonded to the casing and formation, the examiners estimate there is approximately 610 feet of cement that is between 80% to 100% bonded to the casing and the formation, exceeding the Commission requirement of 100 feet. The Protestant's expert stated only 50 feet of 100% bonded cement was needed to form a hydraulic seal.

Approval of the requested permit is in the public interest because it will promote the development of the Eagleford Shale in Karnes County and adjacent counties. The majority, if not all, of Karnes County is believed to be productive due to the widespread presence of the Eagleford Shale. This disposal well and others will be needed to accommodate current and future disposal needs. Well data shows that in Karnes County from December 2011 through December 2012, the number of producing oil wells have increased from 282 to 683. Oil and gas production from the Eagleford Shale in Karnes County has also increased dramatically. Oil production increased from 2.4 million barrels per month in December 2011 to 4.9 million barrels per month in December 2012. A review of well data

and oil and gas production records for Karnes, Atascosa and Live Oak Counties combined shows similar dramatic increases. Operators and service companies in the area support and welcome additional disposal capacity. Having an additional facility to dispose of produced water will reduce wait times observed at other disposal facilities in the area. Having a disposal facility close to the horizontal wells will reduce disposal costs and increase hydrocarbon recovery.

Although there are many existing permitted facilities in the county, it is impossible to determine which facilities will eventually get built. It is known certain facilities are permitted by operators with the intent to sell the permit to a third party. Some operators permit a facility with the intention of constructing and operating the facility only to have difficulties finding the necessary capital to do so. Still other operators with a permit may decide against risking the capital and not construct the facility if they do not have ready demand for the use of their facility. Nor-Tex has the required capital and the ready and committed demand to build and operate the proposed commercial disposal facility and has already drilled the proposed well.

The evidence indicates that the operation of the subject disposal well and facility will not adversely impact any surface or subsurface useable quality water and will enhance hydrocarbon recovery.

#### **FINDINGS OF FACT**

1. Notice of this hearing was given to all persons entitled to notice at least ten (10) days prior to the hearing. Notice of the application was published in the *Karnes Countrywide*, a newspaper of general circulation in Karnes County, on February 22, 2012. A copy of the application was mailed on February 29, 2012, to the Karnes County Clerk's Office and the offsetting surface owners and operators within ½ mile of the proposed well.
2. The Nor-Tex SWD No. 1 has been drilled to a depth of approximately 7,600 feet. The top of the Wilcox and Poth formations occur at depth of 6,200 feet.
3. The maximum requested injection volume is 25,000 barrels of water per day and the maximum requested surface injection pressure is 3,100 psi. The requested disposal interval is the Wilcox and Poth formations between approximately 6,200 and 7,500 feet.
4. The Nor-Tex SWD No. 1 is cased and cemented in a manner to protect usable quality water, and injection will be confined to the injection interval.
  - a. The subject well has 5,360 feet of 9<sup>5</sup>/<sub>8</sub>" surface casing cemented to surface.
  - b. The subject well has 7,592 feet of 7" casing, cemented with 345 sacks of cement with a top of cement at 5,390 as identified by a cement bond log.



- c. The Commission requires 100 feet of cement above the proposed disposal interval if the top of cement is determined by a cement bond log, the proposed disposal well has 810 feet.
  - d. Injection will be through tubing set on a packer no higher than 100 feet above the top of the injection interval.
  - e. The Groundwater Advisory Unit recommends that usable-quality water be protected to 5,300 feet in the area of the proposed well.
  - f. Commission generally requires surface casing set through the BUQW at 5,300 feet and not the underground supply of drinking water (USDW) depth at 5,900 feet; Nor-Tex is compliant with this requirement.
  - g. The Commission generally prohibits the direct injection of disposal fluids into the USDW; Nor-Tex is compliant with this restriction.
5. There is one wellbore and two horizontal laterals within a  $\frac{1}{4}$  mile radius of the proposed disposal well. Neither of the wells creates a potential conduit for disposal fluids to leave the permitted interval or poses a potential threat to usable quality water or oil and gas production in the area.
6. A more extensive review of wells with  $\frac{1}{2}$  mile radius area of the proposed disposal well identified one additional completed well and one permitted location. Well records of well within the  $\frac{1}{2}$  mile radius demonstrate the wells will not pose a potential threat to usable quality water or oil and gas production in the area.
7. Nor-Tex conducted a water-well study in the area and found sixteen water wells within two miles of the proposed disposal well. The wells are used to supply livestock, rig supply, industrial use and domestic use. The water-well depths range from 200 feet to 1,210 feet, indicating all area water wells are exploiting only the shallowest ground water sources.
8. Nor-Tex conducted an environmental site assessment to determine the condition of the land prior to Nor-Tex taking possession of the property. The conclusion of the report was the property was mostly undeveloped or agricultural land and there was a low environmental risk from the property for Nor-Tex to operate their disposal facility.
9. The design of the facility is based on Nor-Tex's members experience in constructing and operating other disposal facilities. Justin McIntosh, a member of Nor-Tex has designed and overseen the construction of over twenty saltwater disposal facilities and has operated many disposal facilities

for other operators.

10. The Nor-Tex SWD Facility will incorporate all required standard containment design features for commercial disposal facilities. The proposed facility will be a closed system which uses pipelines and closed tanks to unload, transport, treat and store disposal fluids. The facility will use pressure regulated injection pumps which are set to shut off at the maximum disposal pressure of 3,100 psi to ensure the maximum authorized pressure is not exceeded. The entire pad will be outside the 100-yr flood plain.
11. The facility's pad is large enough to accommodate over 25 trucks on the property without the need to have trucks parked and waiting along the county road to off-load disposal fluids.
12. The Eagleford Shale trend is a large unconventional trend that is under going active, rapid development throughout Karnes, Atascosa and Live Oak Counties.
  - a. In Karnes County as of December 2011 there were 282 producing oil wells. One year later, in December 2012 there were 683 producing oil wells.
  - b. Oil and gas production from the Eagleford Shale in Karnes County has increased dramatically. In one year from December 2011, oil and condensate production increased from 2.4 million barrels per month to 4.9 million barrels per month in Karnes County.
  - c. The number of producing oil wells in Karnes, Atascosa and Live Oak Counties has increased from 511 wells in December 2011 to 1,098 wells one year later.
  - d. Oil and gas production from the Eagleford Shale in Karnes, Atascosa and Live Oak Counties has increased dramatically from 4.0 million barrels per month in December 2011 to 6.8 million barrels per month in December 2012.
13. Nor-Tex received a letter of support from Titan Vacuum Services, which hauls and dispose of salt water in and around Karnes County. The trucking company finds area disposal facilities unacceptable as they have experienced long wait times and congestion at existing commercial disposal facilities. Titan stated they will haul between 3,000 and 15,000 BWPD to the proposed Nor-Tex facility.
14. There are a large number of permitted disposal facilities in Karnes County.

15. A significant percentage of area disposal permits are issued to "speculator" operators with no intention of building or operating a disposal facility only to sell such permit to a second operator.
16. An additional percentage of the area permits are issued to operators that do not have the expertise or capital to build and operate a commercial disposal facility.
17. There is no way to predict which, if any, permitted facility will be built and put into operation.
18. Nor-Tex has facilities in place and has the expertise, capital and committed, ready demand for its commercial disposal facility.
19. Due to increasing development of the Eagleford Shale with horizontal drilling in this area, large quantities of produced water must be disposed of. Use of the Nor-Tex SWD No. 1 as a commercial disposal well is in the public interest of promoting this development by providing a safe and economic means of disposal of the fluids associated with drilling and production.
20. Having a disposal facility close to the horizontal wells will reduce disposal cost and increase hydrocarbon recovery.
21. Nor-Tex Resources, LLC has an active P-5 on file with the Commission, and \$25,000 in financial assurance.

#### **CONCLUSIONS OF LAW**

1. Proper notice was issued in accordance with the applicable statutory and regulatory requirements.
2. All things have occurred to give the Railroad Commission jurisdiction to consider this matter.
3. The use or installation of the proposed injection well is in the public interest.
4. The use or installation of the proposed injection well will not endanger or injure any oil, gas, or other mineral formation.
5. With proper safeguards, as provided by terms and conditions in the attached final order, which are incorporated herein by reference, both ground and surface fresh water can be adequately protected from pollution.
6. Nor-Tex Resources, LLC has made a satisfactory showing of financial responsibility to the extent required by Section 27.073 of the Texas Water Code.

7. Nor-Tex Resources, LLC has met its burden of proof and satisfied the requirements of Chapter 27 of the Texas Water Code and the Railroad Commission's Statewide Rule 9.

**EXAMINERS' RECOMMENDATION**

Based on the above findings and conclusions, the examiners recommend that the application be approved as set out in the attached Final Order.



Andres J. Trevino P.E.  
Technical Examiner

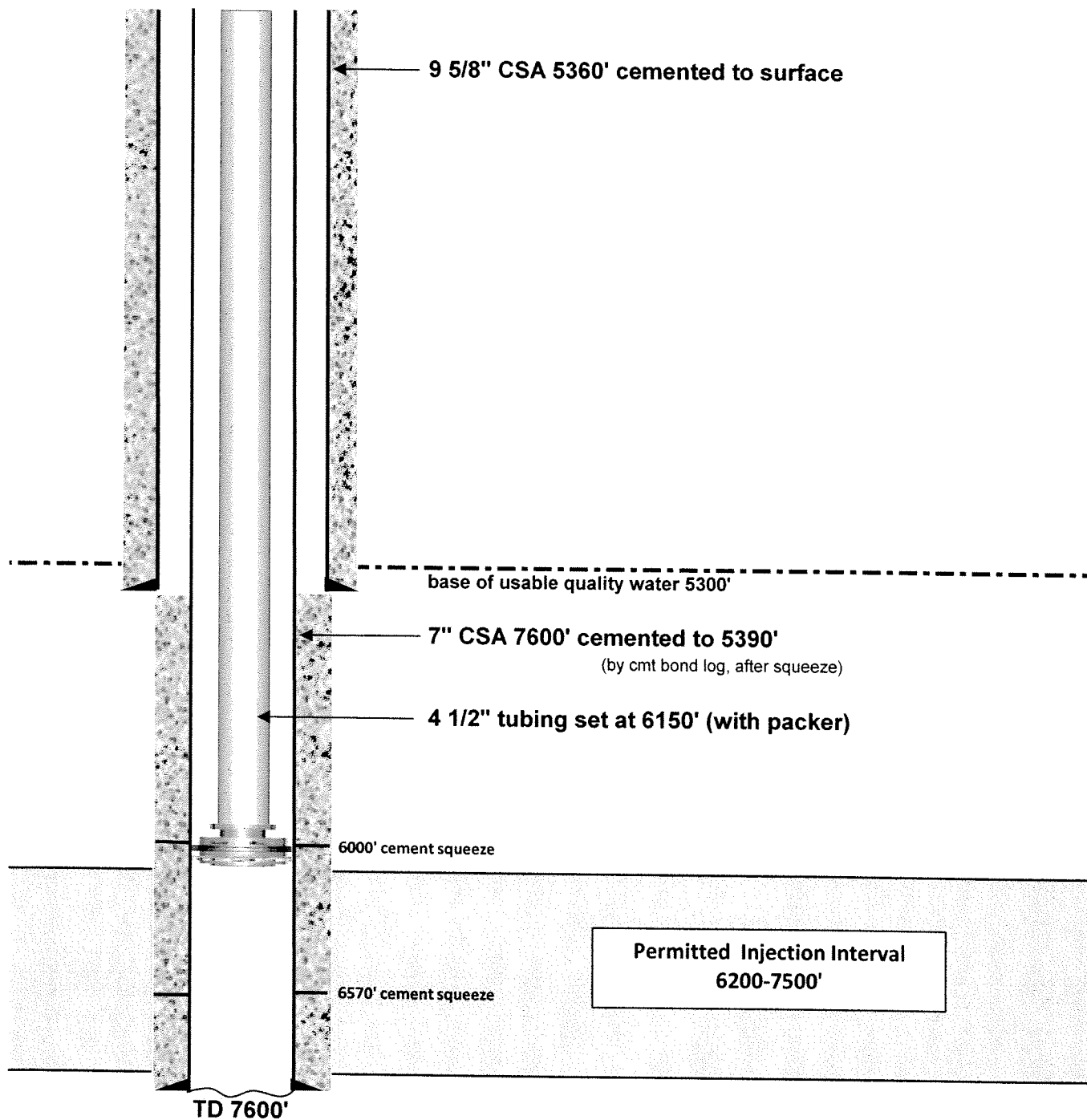
Respectfully submitted,



Laura Mile-Valdez  
Hearings Examiner

**Wellbore Sketch**  
**AS DRILLED**  
**Nor-Tex SWD #1 255-32564**  
**Karnes County, Texas**

1



Nor-Tex Resources, LLC  
Exhibit No. ✓ 9  
Docket No. 02-0277320  
April 18, 2013